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## Masterplanning and Infrastructure in New Communities in Europe

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### Introduction

Fifty years ago, Britain looked to the USA for inspiration, and European cities were outclassed by their American counterparts. Over the past few decades, the situation has been transformed. Rather than New York or Chicago, the Urban Task Force (1999) pointed to places such as Barcelona and Rotterdam as models for how British cities might achieve an 'urban renaissance'. Its report was one of the first to draw attention to the importance of three-dimensional masterplanning.

While the UK used the dividend from offshore oil to fund imports and to fuel private consumption, other European countries invested in infrastructure on a much larger scale, from urban trams to wind farms and local energy generation systems. At the same time, as comparative studies such as the *State of European Cities* (European Commission 2007: 41) report bring out, their cities have thrived: 'If all available variables are being given equal weight, then it becomes clear that many of Europe's high performers are located in Denmark, Sweden, Finland, the Netherlands and the western parts of Germany.' Outside southern England, English cities have not done as well as their surrounding regions.

Of course British cities have had to cope with a legacy of industrial decline, and a weak economy. But urban decay can be reversed. The amazing

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renaissance of cities destroyed by war-time bombing, such as Hamburg and Rotterdam, show that the key to sustainable growth is joining up development and infrastructure. A short trip by Eurostar from London St Pancras to the Continent will confirm this important message:

- *Lille*, and the neighbouring towns of Roubaix and Tourcoign, used to be seen as one of the worst cities in France. Thanks to the efforts of its mayor, and his ability to persuade over 80 communes to back a surcharge on the payroll tax, this former industrial city positioned itself on the European high speed rail network, built a new driverless metro costing some £700 million and upgraded its trams, making the whole conurbation highly connected (see Cadell *et al.* (2008) for detailed case studies of Kop van Zuid in Rotterdam and Roubaix in the Lille conurbation). As is common in France, a *société mixte* – a 50:50 partnership between the city and the private sector – was set up to develop the mixed use scheme on the old barracks around the new railway station. Lille also pioneered the system of *Contrats de Ville*, between the city and central government, to provide the long-term security needed to restructure the city's economy, and enable disadvantaged areas like Roubaix to share the benefits. While opinion is divided on the quality of Rem Koolhaas's masterplan for Eurolille, there is little doubt that the city as a whole has undergone a renaissance.
- Carry on to the *Randstad*, where the cities of Rotterdam and Amsterdam are now on the European high speed network. The Randstad is similar in extent to Greater London, but more polycentric. As well as the new metro stations and high speed station in Rotterdam, there is a new light rail system connecting all the main conurbations. A short trip by metro, tram or river taxi to the former dockland peninsula of Kop van Zuid, with its masterplan by Norman Foster and others, shows that what was formerly a poor relation of Amsterdam has become a creative centre in its own right.
- One could also travel on to Karlsruhe (with its extensive tram train network) and visit *Freiburg* in Southern Germany – known as the solar capital of Europe as there are solar panels everywhere (see Figure 2.1). Though Freiburg benefits from publicly owned utilities, it was the city council that led the way by insisting on higher standards of renewable energy on all land owned by the council, with combined heat and power commonplace. Thousands of 'green collar' jobs have followed.

What is not so obvious to the visitor is how northern European cities have managed to overcome all the obstacles that plague doing anything similar in the UK, from articulate opposition to building anywhere (NIMBY and BANANA), to endless arguments over funding, even when routes have long been agreed. There is also little understanding of the interrelationships



**Figure 2.1** Solar panels in Vauban help make Freiburg the solar capital of Germany.

between physical infrastructure, and the wider goals of improving our quality of life and tackling the issues that shape political change, or how individual cities have overcome the loss of traditional industries. There is no agreement on – even awareness of – the link between higher levels of connectivity and success in economic or social terms.

The focus of this book is on delivery. In this chapter, I review what might be learnt from Continental approaches to masterplans and infrastructure provision. I summarise some common challenges before drawing lessons from case studies of innovative urban extensions. Dutch experience, with new settlements in the Randstad, shows how masterplans and infrastructure provision can be joined up. Finally I draw out lessons for the UK. The findings are drawn from both study tours and published sources, starting with research for the Joseph Rowntree Foundation (Cadell *et al.* 2008). Our work on *The Cambridgeshire Quality Charter for Growth* (Cambridgeshire Horizons 2008) was inspired by study tours to both Amersfoort in the Netherlands and Freiburg in southern Germany. In a project with PRP and Design for Homes we visited and compared ten possible models for ‘eco-towns’ in Germany, the Netherlands, Sweden and the Republic of Ireland to establish what they had in common (see PRP *et al.* 2009). Some of the findings have been published by the Smith Institute and the Housing Forum (Falk 2009; Housing Forum 2009). Evidence for how the Dutch system works

is also drawn from successive editions of *Built Environment*, and discussions with its editor, Sir Peter Hall<sup>1</sup> and Han Lorzing at the Netherlands Institute for Spatial Research, to whom I owe special thanks.

## Differences between the UK and Europe

In *Sustainable Urban Neighbourhoods* (Rudlin & Falk 2009), David Rudlin and I explain how Britain and North America chose to pursue very different sets of values from the social-market countries of northern Europe in misguided attempts to contain the city, and draw firm boundaries between town and country. If you get the foundations right with a shared vision, quality growth will follow. Unfortunately masterplans have been taken over by architects who assume that if you can visualise everything, you have solved the main problems of development. Design guides or codes are then seen as ways of regulating how things are built. Yet inevitably circumstances change, and plans need to be flexible. So a masterplan should not be seen as a blueprint (after all a new community is not a machine), but as a trellis, which will help guide the community's growth.

British planning is rightly criticised as being over-concerned with the end state, and not with how to get there. As Carmona *et al.* (2010) have noted, masterplans are often criticised as overly rigid and inflexible, and for suggesting or proposing a greater degree of control than is actually desirable, necessary or possible. Garreau (1991: 453, from Brand 1994: 78), for example, defines masterplanning as

... that attribute of a development in which so many rigid controls are put in place, to defeat every imaginable future problem, that any possibility of life, spontaneity, or flexible response to unanticipated events is eliminated.

Garreau is, however, referring to a particular type of masterplan – 'blueprint masterplans', which are associated with 'big architecture' projects. A less rigid form is the 'development framework'. The key difference is that while blueprint masterplans specify a single intended outcome, framework masterplans generally set out broad urban design and place-making aspirations and principles. They allow scope for interpretation and development within the framework's parameters – the final outcome is also typically multi-authored as in the Cambridgeshire Quality Charter and the Hulme Design Guide. What is needed is a menu from which good choices can be made, not a cookbook for each site.

Regulatory and indicative plans are not enough when the market is weak, and when the development may take several decades to complete. Advance infrastructure is needed with serviced plots so that smaller builders can

undertake development on the place-promoter's terms. Advance infrastructure incentivises developers to (a) take part and (b) take part now. In the UK, there are often numerous masterplans produced for the same site and yet little happens on the ground (over 70 masterplans have been produced for the Royal Docks in London for example). Masterplanning is often an exercise in architecture on a grand scale, wasting resources rather than mobilising them.

In contrast, in the examples in continental Europe that we have examined, there is a *single* masterplan *and* it gets implemented. The masterplan also positively shapes the context within which developers act, while the incentive of infrastructure means that 'design strings' can be attached. In other words, infrastructure *is* fundamental to place-shaping and to putting urbanist principles into practice. The term infrastructure, incidentally, needs to embrace not just the hard physical infrastructure of roads and utilities, but also the soft or social infrastructure of schools, shops and meeting places that can make or break new communities. Exemplary schemes such as in Freiburg or Stockholm also benefit from their connectivity to high quality infrastructure, such as municipal tram systems or district heating schemes.

## Challenges for sustainable development

Despite the common belief that Britain is uniquely built-up and vulnerable to all the problems of traffic congestion, a simple air flight or, better still, satellite view of Europe by night reveals that the London agglomeration is dwarfed by the extent of the conurbations across the Channel. Though London likes to think of itself as a 'world city' competing only with places such as New York and Tokyo, in practice the whole of the greater South-East is a 'polycentric conurbation' that has to compete for both key workers and investment with a number of other agglomerations in terms of the quality of life it offers its residents. The closest rivals are the Randstad and the Paris region, with which Britain shares a close history, and also the Rhine Ruhr area. In southern Europe there is also a major agglomeration in northern Italy centred on Milan, with links being improved both along the Mediterranean and also through to Switzerland.

It is these agglomerations that attract what, in his novel the *Bonfire of the Vanities*, Tom Wolfe described as the 'masters of the universe'. It is where national politicians and media figures tend to congregate, and consequently where some of the most important strategic decisions are taken – whether to go to war, build a rapid transit line, or put the resources into stadia or galleries instead. Over the course of a generation, neighbourhoods go up and down in popularity, as the gentrification of places like London's Islington illustrate. But in general in the UK, those with choice and families leave the inner city areas for the leafy suburbs. The major challenge is consequently

how to create new residential areas that can compete with the appeals of living in established areas close to the country and a good school for the children.

### *The forces of polarisation*

Residential populations are somewhat arbitrary. What matters is the functional urban area or travel-to-work area which is determined by commuting times (and in places that are highly rated, such as Amsterdam and Zurich, on average this is half an hour each way). Where travel times are cut, and services improved, there is a tendency for those who can afford to do so to live even further away. Hence different kinds of urban life are evolving, which overlap but do not connect, and which have very different carbon footprints. Not only are people far from equal, but they practise quite different lifestyles, as the multi-coloured maps produced by commercial research organisations such as Experian Mosaic clearly reveal. What looks like a constellation or galaxies of stars turn out to be made up of different kinds of places, with a great deal of 'dark matter' in between.

Thus, highly accessible areas surrounding both London St Pancras and Brussels Midi International stations attract populations from all over the world. A combination of lack of language and other skills can result in local residents lacking paid work and facing the highest competition for the jobs that can be done with least qualifications, such as working in bars serving coffee. Customers too will have come from all over the world, and may be making the most of the new infrastructure. Such places attract the 'rising stars', but also those on their way down. The value they add to the stream of human capital flowing through them is the product of social infrastructure (such as educational and health institutions) and a city's capacity to help people make good connections.

### *Need for holistic masterplans*

Physical masterplans usually have little to do with how well people get on with each other, or with the quality of area management and the maintenance of the public realm. However, they should be a mechanism for coordinating public services, and securing co-investment, not just a means of regulating private developers. In a global economy, and one where competitive advantage comes from the ability to deploy knowledge to good effect, basic levels of infrastructure and connectivity – energy, water and waste removal – are no longer enough. Companies choose to locate where they can be in easiest range of key customers and skilled labour as the growing commercial areas around Heathrow and Amsterdam Schipol airports illustrate.

In turn clusters of activity create their own dynamics, through spin-offs and the products of the collaboration that comes from 'agglomeration economies', whether these be a good choice of restaurants or readily accessible broadband communications, both of which enrich social capital. The easy access offered through better infrastructure can work both ways. Hence investments in major new infrastructure projects need to be combined with social measures if they are to pay off in the full sense. Planning for development and for infrastructure need to go hand in hand.

The relationship between infrastructure and urbanity is complex and crucial. At its roots are the streets themselves. A great city will inevitably have a few great streets – its boulevards and arcades. But it will also have many more less obviously 'special places' where people can express themselves. The dynamics of property development mean that the very places that are special today may become commonplace tomorrow, as the pioneers move on. It is this process of discovery, colonisation and coproduction or gentrification, which enables great cities to reinvent themselves again and again as writers like Jane Jacobs have vividly pointed out in, for example, *The Economy of Cities*.

Because infrastructure tends to be long-lived, the networks of sewers and water pipes, metro lines and bus routes, and gas and electric distribution systems form a 'nervous system' that enables the conurbation as a whole to function and deal with huge numbers of people coming and going all the time. This 'spaghetti of tubes' lies at the root of the 'wealth of nations'. The number and quality of nodes, just as in a brain, support urban intelligence, as evidenced by London having many times the nodes of an equivalent-sized area in Luton. The maintenance and upgrading of these nodes should be central to efforts to improve our quality of life, and deal with the long-term effects of climate change and resource depletion, as they are in mainland Europe. Indeed, they were what gave rise to the formation of local authorities in the first place. In Britain, however, unlike the rest of Europe, local authorities have ended up with planning responsibilities, but without the means of delivering either the basic infrastructure or conditions required to attract quality investment.

The common challenges that these agglomerations have to address include congestion and stress caused by people trying to reach other places at the same time, and the consequent impact on carbon emissions and air pollution. Competition for limited space causes prices to rise, particularly if there is no agreed way of improving supply. House price inflation widens inequalities, which in turn weakens the sense of community, and may contribute to social malaise (Wilkinson & Pickett 2010). The solutions include not just urban renewal and regeneration (where in the 1970s British cities were making some major advances), but also urban extensions and new settlements (where, since the era of the New Towns, the UK has lagged far behind Continental practice).

### *The infrastructure deficit*

Changing infrastructure is now much more difficult than a century ago. When Hampstead Garden Suburb was originally developed, the houses required little more than connections to municipal gas and water systems. Development was viable because it was grafted on to the extension of the Northern Underground Line out to Golders Green. An entrepreneurial American raised the finance to build a major new railway line from the expected proceeds from selling season tickets, and a multitude of small builders created small blocks of houses within an overall masterplan. There was little choice for those getting to work from the new suburbs other than using the Tube to reach the City – a location next to Hampstead Heath was thus inherently desirable as a place to live. As a result of a ready supply of infrastructure, the development of areas such as Metroland on the north-west of London helped produce the greatest period of housebuilding that Britain has enjoyed, with some four million homes built largely in the 1930s.

The situation today is very different. Most people living outside the centre of London no longer use public transport to get to work. Many will drive out of London altogether, making use of the M25 for part of their journey, and will also drive to the shops or to take their children to school. Their lives are closer to what the American writer Joel Garreau (1991) calls 'Edge City'. The town centres that formed the hubs of suburban life – and helped make London what the Danish writer Rasmussen (1937) called the 'Unique City' – which, for the most part now look run down, worn out and very ordinary. There is no longer the cheap land available on which to build, with a green belt acting as a further barrier to getting on the housing ladder.

Today's residents not only want high accessibility by car, they also demand a much more sophisticated energy system, and use much more energy to heat and run their homes. Instead of simple monopolies to supply the energy, there is now competition though regulated private companies. Given the much greater uncertainties over both demand and supply, and a very much more complex planning system, it is not surprising that housebuilding levels have dropped far below the levels achieved in the inter-war period on the back of extensions to the capital's public transport system. Less obvious (apart from holes in the capital's main streets) is the strain being placed on all the utilities, due to low levels of investment in modernising the infrastructure. Privatisation may have opened up sources of capital for replacing corroded Victorian water pipes, but it has not solved the problems of replacing worn-out transport, waste and energy systems.

Even projects as seemingly vital as Thameslink, and its east-west equivalent Crossrail, have taken decades in planning, and, when built, will

still have nothing like the capacity of the RER system in Paris, or the complex of different routes and transport modes that connect the different parts of the Randstad. Meanwhile the rest of the system suffers from continual breakdowns and closures for planned maintenance, and is relatively expensive to use. Where once British cities were the envy of the world for their complex infrastructure, such as the ubiquitous arches that carried the railways into the centre, much of the capital now looks like a poor relation that has seen better times.

### *Joined-up planning*

The connections between infrastructure, masterplanning and quality places are thus profound. A city sustains itself by offering a high quality of cultural life, from restaurants to galleries, and by attracting a significant part of its working (and student) population to its centres in the evening as well as the day. Such a social life is crucial to persuading those with most talent to stay or relocate. But it needs to be combined with the ability to get quickly and safely to residential areas, including the kind of suburban areas where many families prefer to live. The prices paid for private housing (and the resultant land values) reflect the combination of inherent amenity (such as views of water or open space) and the social and physical capital that a location has accumulated over many decades. For a city to grow sustainably, house prices have to reflect the replacement costs of the infrastructure while being affordable to those entering the housing market for the first time.

Values can be created through inspired planning, as isolated examples like Milton Keynes – with its adage ‘start with a park’ – illustrate. Milton Keynes, however, is inherently car-based. The original masterplan was largely disregarded, but this did not matter because the Development Corporation owned the land and could sell off serviced plots to volume house-builders. Public transport is poor because a high quality public transport system depends on having a dense enough population living close by. Sheffield’s tram system has suffered from low usage because it was built on the cheap along old railway lines through areas with low population densities. Similarly a high quality energy system, such as combined heat and power or district heating, depends on building not only at relatively high densities (over 50 to the hectare), but relatively rapidly in order to amortise the initial investment. It also requires an assured heat load. Where areas have been redeveloped in British cities at high densities over the past couple of decades, they have usually been former industrial areas, such as London Docklands, in areas cut off from good public transport and amenities. Rather than being joined up at a neighbourhood or sub-regional level, planning, development and infrastructure have been kept in isolated silos, and quality has suffered as a consequence.

## European success stories

Though all European agglomerations complain of similar problems of congestion and air pollution, their new urban areas are generally built to much higher standards of quality, with a more balanced population as a result, and they also use less energy. What holds British cities back is that they are trying to compete as places to live and work using ideas, technologies and management systems that are increasingly out of date and wasteful, and without the long-term control that comes from owning the land. They also have the legacy of a worn-out Victorian infrastructure to contend with, which escaped the wholesale destruction suffered by many Dutch and German cities. Whereas the prevailing European model has been the compact city and spatial planning, the British model has been one of urban sprawl, based on leaving the crucial decisions to the market.

Comparative political studies have highlighted the contrast between the Anglo-American liberal model and the northern European social-market or 'Rhenish' model. This is not just about appointing elected mayors or raising funds locally (though both can help), because even quite centralised public finance systems can be made to work, as in the Netherlands. Rather it boils down to a concern for public or communal capital, and a sense of civic pride.<sup>2</sup> Places with apparently similar levels of wealth, expressed as GVA per capita or economic activity levels, such as Freiburg and Cambridge, offer quite different qualities of life. The difference or 'infrastructure deficit' is readily experienced by travelling around a city as a first-time visitor.

### *Infrastructure contrasts*

The deficit can be seen by comparing British cities that have sought to improve their situation with their continental equivalents. Thus Leeds and Bradford, whose development was largely based on the woollen textile trade, can properly be compared with Lille and Roubaix in north-west France. Both conurbations have suffered from the snobbery against provincial cities and from the need to find new economic roles to support large populations. Both were progressive cities – Leeds, for example, boasted for many years of its position on the motorway network and as the first city to complete its ring-road. Leeds is also one of the few British cities that find it relatively easy to attract institutional investment in property. It was committed to a vision of going up a league, but also of narrowing the differences between different areas.

Lille not only benefited from attracting a station on the high speed rail network, but went further and built a high quality metro and tram system

to connect its centre with its suburbs. This was because Lille was better able to put the funding together, in part because it happened to have a mayor who became Prime Minister of France, but also because it could raise a proportion of the funds locally. In Leeds the professional classes have to leave home very early to avoid the long crawl into the centre and to beat the rush to find a parking spot. Though, just as in London, there are suburban railway lines, they suffer from neglected stations on routes that stretch too far out to run frequent services. Councils depend largely on putting together successful bids to government, as all the business income goes to government, and, unlike in France, there are no local sales or payroll taxes. This is a game where private developers hold all the cards.

Though Leeds Station has been modernised, and does boast some electrified suburban lines, the centre itself has neither a metro nor a tram system, and much is dominated by cars. This is not for lack of planning: some £50 million was spent on planning the Leeds Supertram, which, as in Lille, would have linked up a much poorer area at Seacroft (a large peripheral council estate) with the city centre. The land had been acquired and everything designed, when the Labour Government, which had encouraged the City to be ambitious, decided that trams were not the way forward. Instead of going for systems that could divert wealthier people from their cars, the view was taken that public transport was basically for the poor and that buses offered a more cost-effective solution. In turn the plans that had been made for developing land alongside the tram were invalidated. As those running the city had little faith in public transport (nor much interest in learning from Europe), perhaps its demise was inevitable.

It is not just Lille that has made a breakthrough from its previous subservience to Paris, but so have all the French provincial cities. As a result their economies have grown much faster than that of the capital, in marked contrast to the UK. The results are visible and are symbolised by the advanced tram systems that have given new life to older cities such as Bordeaux, or that form the spine of the growing technological centre of Montpellier (see Box 2.1). In turn, rebuilding city infrastructure has provided good business for French (and other European companies). The UK now has to depend on foreign locomotive and rolling stock manufacturers, and once-enterprising British companies, such as the one that built the Strasbourg tram, have been bankrupted by lack of sustained orders.

Civic leadership and local financing mechanisms have combined to enable cities that once seemed to have no future to go up a league. Where there has been huge public investment in infrastructure, such as the high speed train or nuclear power stations in France, there also seems to be a culture that takes pride in modern engineering rather than in money making. Marketing campaigns are used to express the benefits of nuclear power, such as the significant contribution to jobs, and affordable, if not cheap, energy.

**Box 2.1** Montpellier reborn

Like Cambridge, Montpellier is an ancient university town. It is also the fastest-growing provincial town in France. Unlike Cambridge, however, in 2000 it opened its first 15 km tramway after three years of construction, and two more lines have been built since. The decision to build a tram was taken in 1995 because there was no space for new bus lines—bus lanes were often parked on. A tram also creates a sense of *joie de vivre*. The idea of the tramway is to double the modal share of public transport from 17 per cent. There are 75,000 people living within 5 minutes of its 28 stops, and the tram also serves the hospital, university, exhibition centre and railway station, which all act as traffic generators, and this ensures that major attractions are linked.

The project's success is attributed to the city's mayor, George Frêche, who is also chair of the local transport undertaking. He managed to change attitudes to the tram. He also led the conversion of the old vineyards and barracks into business parks through a vision that made the most of the city's location in the sunny south. The university has also been relocated to the city's north with a tram stop in front of the main entrance. The 41 communes that make up the district have a population of 228,000, and Montpellier has grown from being the 25th to the 8th city in France in 20 years, thanks to its position as a centre for high-tech businesses. The total cost was 2288 million French francs (approximately £700 million), of which grants accounted for just over half (the district raised FrF650 million, with the state government providing 28 per cent of the total. The rest came in the form of loans from a consortium of nine banks. The operating franchisee was also the project manager. Many other provincial cities in France, such as Bordeaux, have also invested in tramways, inspired in part by Montpellier's example.

Promotion has gone beyond advertising and PR to include tours of nuclear plants taken up by six million people. Generous compensation has been used to overcome opposition. Public-private partnerships through *sociétés mixte* led by local authorities help dispel some of the ideological opposition that plagues major projects in the UK. Specialised banks such as the Banque de Caisses and the Bank Nederlandse Gemeenten provide municipalities with low-cost long-term loans for infrastructure so that they do not depend on bidding to government.

Because most infrastructure lies beneath the surface, it is inherently easier and less expensive to install new forms in new developments around the edges of a city than to redevelop older areas, provided they can piggy-back off existing infrastructure. Location rather than density shapes the economics of development. This gives rapidly growing cities an advantage, particularly if they can acquire the land at its existing agricultural value, as the New Towns were able to do. As a generalisation, based on cost calculations for the growth

of Cambridgeshire, the cost of building a new home divides three ways more or less equally between land, infrastructure and the house itself.

Whereas continental cities see their role as providing serviced sites for development, housebuilders in the UK compete for sites, and have to fund the infrastructure through Section 106 agreements. As a result they bid up land prices, and build smaller and worse-equipped homes than on the continent. They naturally resist adding to the building costs by making new homes carbon-free, pointing out that customers will not value the improvements. Even before the fall-out from the 'credit crunch', first-time buyers were no longer entering the market. Once higher deposits were required, the whole house of cards that is the British home-building industry came tumbling down. In turn, the masterplans and their complex and expensive Section 106 agreements rapidly became redundant.

Comparisons between similar developments in Hammarby-Sjostad in Stockholm and Greenwich Peninsula in London (which was masterplanned by Ralph Erskine, an Englishman who lived and worked in Sweden) showed that the Swedes are building at some five times the rate, and this seems to apply more widely (see Falk 2008). As a result, though there is generally higher investment in advanced infrastructure up front, this is amortised far faster, and the profit rates can be reduced because the risks are much less (see Cadell *et al.* 2008). The failure to build effective long-term partnerships between the public and private sectors could be blamed on an adversarial and legalistic culture, and on a professional middle class that thrives on disputes, with much greater status and rewards for accountants and lawyers than for engineers or planners. It also stems from relying on large private developers to take the initiative, and overcome all the obstacles, rather than having the confidence to sell plots of land off to a multiplicity of housebuilders within clear planning frameworks but flexible development briefs.

The best examples of masterplanning for sustainable development can be seen in the influential urban extensions of Rieselfeld and Vauban in Freiburg (see Box 2.2). The circumstances in this historic university town are surprisingly similar to those in Cambridge, with the difference being that the centre of Freiburg had to be completely rebuilt after Allied bombing. By providing quality public transport from the start, and making it more expensive and difficult to park a private car, Freiburg has succeeded in shifting people away from their car towards public transport and cycling. Indeed for Germany as a whole, while car ownership levels are higher than in the UK, car usage is less, and people seem to take pleasure in well-run public systems that support communal life.

Though what has happened in Freiburg is in many ways exceptional, and owes much to the leadership of both the city's director of development, Wulf Daseking, and its Green Party mayor, similar schemes can be seen in many other cities. Though the general pattern is one of municipal

### **Box 2.2** Freiburg reinvented

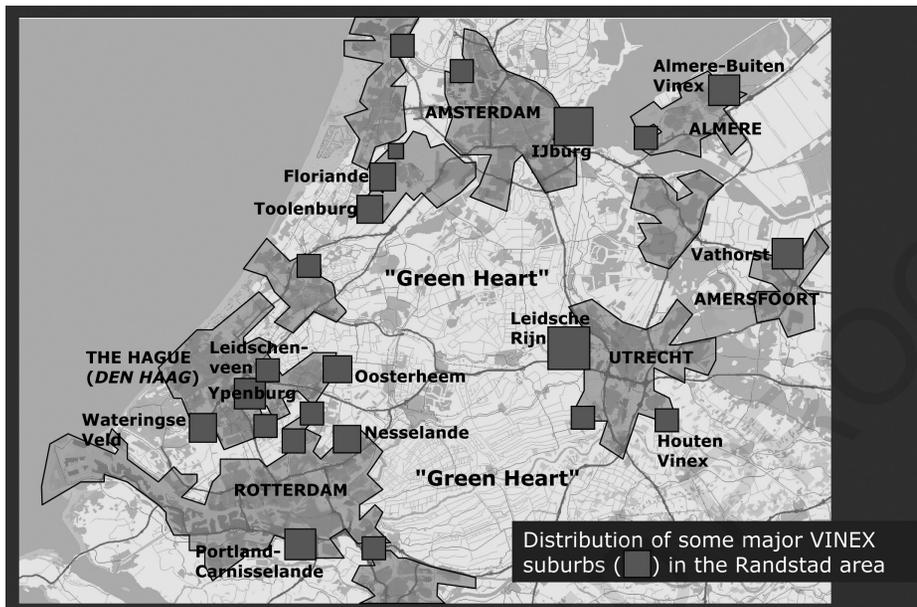
The historic German city of Freiburg has gone for several planned extensions to cope with demands for more space. There are some 215,000 inhabitants, and the population is youthful and growing fast. The two settlement extensions of Rieselfeld and Vauban of 12,000 and 5000 residents respectively, have won many awards, and tackle some basic issues that apply equally to British cities, such as attracting families to live at high enough densities so that they do not depend on the private car, and can secure the benefits of combined heat and power.

The apartments have been made attractive through a number of features. First, they are set in a natural landscape, which creates the sense of living in the country. Access to allotments is easy. Each block looks different and this is encouraged by the high proportion being developed by cooperatives, in which the occupiers invest 'sweat equity'. In Vauban, inspired perhaps by the 'whacky' conversions of the old barracks, the residents take great pride in the semi-communal gardens.

The pattern of splitting blocks into maisonettes with separate entrances and large balconies overcomes many of the disadvantages of flat living. But it is probably the appeal of children growing up with ideal play conditions that attracts so many young parents to these new developments (though possibly storing up problems for later when they become teenagers). While the blocks tend to be similar in height and footprint, each block looks individual because of the rich variety of materials and colours used. In Vauban, the policy of keeping cars in peripheral car parks also helps to make the development quieter and safer. The use of crossroads without priority helps to keep traffic speeds down without any need of humps.

The developments are controlled through relatively simple B-Plans that specify all the basic rules, such as plot ratios and provision for public space. The sites are then sold off to a profusion of relatively small builders, often working through cooperative groups, which helps cut costs as well as secure pre-sales, thus reducing the development risks.

leadership, as in Kronsberg in Hannover, there are also examples of public-private partnership, such as the new settlement of Kirchsteigfeld in the suburbs of Potsdam to the East of Berlin. What they have in common is the greater availability of local finance, which in turn enables a much wider range of builders and tenures. Cooperative housing is much more commonplace, which again helps speed up the process of building a new community, as it takes away many of the risks. Competitions are used to appoint developers on the basis of quality rather than price. Instead, the price of land is determined as a proportion of the expected sales value at around 25–30 per cent, a principle which seems to apply in a number of northern European countries.



**Figure 2.2** The VINEX programme involves extensions to major towns and cities in the Randstad (reproduced by permission of Han Lorzing).

### Joined-up planning in the Randstad

The clearest, and in many ways most replicable, model for combining planning, development and infrastructure comes from the Netherlands, and the way the different towns and cities of the Randstad have worked together for the common good over many decades. The Randstad or 'rim city' is a ring of 15 towns and cities around a 'Green Heart' (see Figure 2.2) that has been at the heart of much of European thinking, from contracts between the government and the cities, to the Spatial Development Perspective, and also the idea of mixed or balanced neighbourhoods. The original masterplan for the Randstad, which dates back to 1956/8, was to develop along the main traffic arteries, with compensating green wedges and buffer zones. High quality public transport connects the cities to the High Speed European Network and reinforces suburban transit systems with a new light rail route. Possibly because much of the land itself was created from the sea, the Dutch have a long tradition of municipal enterprise and leadership – the so-called 'polder mentality'. Some 80 per cent of building land was supplied by the municipalities who had acquired and serviced it. It is this factor, rather than the profusion of plans, that Barry Needham (1989) contends is at the heart of what makes the Netherlands feel so orderly and well-planned.

The Netherlands has been leading the way for a number of decades. As far back as the 1970s, as Andreas Faludi (1989) points out, there was a programme for building 'growth centres' of 6000 dwellings each. Between 1979 and 1984 Structure Schemes were drawn up for all aspects of infrastructure, from traffic and transport and electricity supply through to outdoor recreation and waterways. Planning, however, was not a political hot potato, as in the UK, but rather part of a way of life that set out to use national resources in ways that promote a better quality of life for the ordinary citizen. Architecture centres in all the main Dutch cities are part of a complex set of processes aimed at enabling ordinary citizens to appreciate and get involved in the way their cities are developed. However, reliance is not placed on prescriptive physical plans or standards, but rather on a more fruitful dialogue between the different stakeholders.

With similar objectives to the UK's *Sustainable Communities Plan* (ODPM 2003), which set out to build 3 million new homes, VINEX – the fourth Dutch Ten Year Housing Programme (1996–2005) – deserves much more attention in the UK than it has yet received (see Lorzing 2006). House price inflation in the Netherlands has been restrained by continuously building new homes, much on land which has had to be won from the sea through super dikes or 'polders'. The housing stock has been increased by almost 8 per cent in ten years through the VINEX plan, which produced some 90 sustainable urban extensions – 23 in the Randstad alone. Over half the 455,000 new homes have been built in new suburbs on the edge of existing towns and cities. The secret lies in the way that different agencies work together. The sustainable urban extension of Vathorst in Amersfoort, near Utrecht, provides a good example of how the process works (see Box 2.3 and Figure 2.3).

As with the Sustainable Communities Plan and the English Growth Points, local authorities were invited to submit bids for inclusion in the VINEX programme. Though there has been criticism from Dutch architects, English visitors generally like the results, and indeed they have proved very popular. Though government assisted with seed capital to help in decontaminating land and providing access, the schemes have had to be self-funding. VINEX sought to create places that were relatively compact (over 30 dwellings/ha), well-connected by public transport to jobs and services, and with at least 30 per cent of the housing being affordable.

While the objectives behind the two national plans were similar, the process for implementation was very different. In VINEX, local authorities played the leading role in both commissioning masterplans and providing infrastructure. There is focus on 'branding' different neighbourhoods with distinct identities as Han Lorzing (2006) has shown. Walking and cycling are favoured, with home zones almost everywhere. Settlements are much greener than UK housing estates, with, for example, the retention

**Box 2.3** Vathorst, Amersfoort – a sustainable urban extension

In 1998, the municipality and the government drew up an agreement on the size of the extension, the contribution they would make to reclaiming contaminated land and how the settlement would be connected to the two motorways it adjoined. Vathorst, consists of some 11,000 homes plus shopping facilities, business and community facilities, and is almost half completed. The Vathorst Development Company (OBV) was set up as a 50:50 joint venture between the local authority and a consortium of private landowners and developers. The private sector included those who had bought land in the area but also those whom the city wanted to be involved as a result of their track record.

The company drew up the masterplan and then installed the basic infrastructure before selling sites on to its partners. The borrowings are repaid out of the proceeds from land sales. Each shareholder/developer carries out the detailed architectural work for the area it has been allocated. The company then provides the services and infrastructure. When these are ready, the site is sold to the developer to construct within an agreed and binding programme.

Over the three-year period prior to building starting in 2001, a number of exercises took place to determine the shape of the project. Theme groups were set up to develop certain ideas, such as how people might live in the 21st century, which identified changes such as more people living and working from home.

The company formally commissioned the masterplan with the city's planner working alongside a notable Dutch urban designer. All the partners were involved in the process. Amersfoort consists of four separate districts in very different styles. For example, one contains a modern version of canal-side housing, with 60 per cent of the homes having views of water, while another is designed to feel like living in the country.

Eight different builders and some 50 different architects were involved with no architect designing more than 80 units to ensure choice and variety. The social element, which covers both subsidised renting and housing for sale, is allocated through the municipality, but provided through associations. The focus is very much on social sustainability. Ensuring a balance of housing at a neighbourhood level (originally 300 now 500 units to reflect four different price ranges plus social housing) helps create cohesive communities.

of water run-off on site in open canals and streams that add to the attractions of living in a new neighbourhood.

There are also important cultural differences, as the Netherlands is much less class-conscious and a more equal society than the UK. According to the OECD they have the happiest children and the UK some of the unhappiest; they also do better on many other measures of wellbeing and equality (Wilkinson & Pickett 2010). As in the other 'social market' countries of



**Figure 2.3** New canals in Vathorst deal with water run-off and add to the attractions of living there.

northern Europe such as Sweden, people are less individualistic and more considerate, partly due to conscious efforts to secure integration and 'social etiquette'.<sup>3</sup> It is common to live in rented housing in cities, and indeed 30 per cent of the population are eligible to live in social housing, which gives housing associations a strong role. Thus, into the 1980s, home ownership in the largest Dutch cities accounted for a mere 20–30 per cent of homes, compared with 60–70 per cent in the post-1995 suburbs. There has also been a substantial devolution of powers and responsibilities to local authorities over the past four decades, and a tradition of using regional planning to link transport investment and development.

### **Conclusion: lessons for the UK**

The most powerful objections to building more housing in the South-East and around some other conurbations are that the supporting infrastructure is over stretched, and that we cannot afford to fix it. The reforms of the planning system have also done little to overcome the doubts. As well as the perennial problem of congestion and stretched schools, climate change and declining reserves of gas and oil mean that we now face crises of even greater dimensions. Cities have to compete for investment in a global market, and offer a comparable quality of life. Rebuilding our power supplies could add 25–60 per cent to energy bills according to [Offgen](#). A similar dilemma applies to transport.

Though drawn from cities with very different institutional structures and national cultures, the examples in this chapter have a number of ingredients in common. I call these the ABC of leadership, and the principles are universal.<sup>4</sup>

- (1) They start with the *ambition* to create quality places, and do not simply react to unwanted developers' schemes. Their ambition is founded on a realistic assessment of what is possible, often forged through visits to comparable places. The process is led by intelligent local authorities, not driven by government targets.
- (2) They act as *brokers* and pursue a balance of objectives and schemes. Hence they secure benefits for their existing communities, not just those wealthy enough to afford a new home or office. Planning for infrastructure and development go hand in hand, and new developments aim to change attitudes and behaviour.
- (3) Finally, they go for *continuity*, with many of the same officers and councillors being involved over several decades. Regeneration takes a generation and cannot therefore be secured through a succession of consultants, however talented, or through continual reorganisation.

Through positive planning at the sub-regional level, for example in designating well-located growth points following sustainability appraisals, good government saves resources and reduces risks. By taking a long enough time span of some 20 years, projects benefit from the uplift in land values following the upgrading of infrastructure, and improvements to the public realm. By planning holistically (which means giving equal weight to economic, social and environmental considerations) projects not only change an area's image, but also attract new sources of wealth creation.

The long-term approach needed for 'green recovery' means getting away from the 'lottery' of bidding to national government, the 'silos' of departmental policies and the roundabout of ministers and council Leaders. It means working up schemes that are resilient enough to withstand shocks, for example by focusing on natural 'growth points' and avoiding the principle of 'worst first' through local authorities working in partnership with private developers. Almost coincidentally, 15–20 years is exactly the time horizon needed by long-term investors such as pension funds and insurance companies. It is also the time needed for children to reach maturity and for saplings to grow into trees.

Rather than trying to patch up a leaky vessel, we should use the financial crisis to innovate. We must use strategic planning as we did in war time to focus enough resources on a few fronts where we have a hope of winning, rather than spreading our limited capital and expertise too thinly to make any difference. Local authorities need to be freed up so that resources can be

joined up at local level, and funds raised for long-term investment, for example through infrastructure bonds. Even if investment managers sometimes act like 'irrational herds', government should encourage some of the banks (particularly those that are in public control) to follow the Dutch or French models. Investors, such as pension funds, would benefit from rental growth extending beyond the usual business cycles, and from funding infrastructure without relying on government grants or suppliers.

This 'natural' way of building – 'balanced incremental development' – holds the key to securing 'smarter growth'. By investing in the right locations, starting where it is easiest, and then reinvesting the surplus, just as a good farmer or gardener would do, much stronger, more resilient and better quality growth can be achieved that will meet the demands of the 21st century, whatever they may be. It will create the diversity that leads to healthier places and people. It will also provide a model that could inspire people in other places because it can be readily replicated.

## Notes

1. The contents of this excellent magazine can be sampled on [www.rudi.net/bookshelf](http://www.rudi.net/bookshelf). The special edition *Towards Sustainable Suburbs* (Falk 2006) includes an excellent account of the highly successful Dutch VINEX housing programme by Han Lorzing (2006), whose research shows how to build new suburbs that can rival established places.
2. These are lessons that have emerged from a series of study tours followed up by Leadership Masterclasses in Cambridge, and expressed in the Quality Charter for Growth, which identified a series of features that successful places have in common, including collaboration between all the stakeholders.
3. More information on Dutch cities can be gained from the reports of TEN Group study tours (see [www.urbaned.com](http://www.urbaned.com)), and also from the case studies in Cadell *et al.* (2009).
4. These lessons are drawn from masterclasses on developments in Amersfoort, Freiburg and Harlow organised for Cambridgeshire Horizons.